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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,843	05/30/2007	Desmond Ebenezer	920629-104211	5436

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Husch Blackwell Sanders, LLP
Husch Blackwell Sanders LLP Welsh & Katz
120 S RIVERSIDE PLAZA
22ND FLOOR
CHICAGO, IL 60606

EXAMINER	
HOLLINGTON, JERMELE M	
ART UNIT	**PAPER NUMBER**
2829	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/599,843	EBENEZER ET AL.	
	Examiner	Art Unit	
	Jermele M. Hollington	2829	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 April 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7, 9-23 and 32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7, 9-23 and 32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-23 have been considered but are moot in view of the new ground(s) of rejection.

Drawings

2. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: in Fig. 1, item numbers 10, 16 and 18; in Fig. 2, item number 10; in Fig. 5, item numbers 32, 40, 42, 44, and 46; In Fig. 6, item numbers 50 and 52; in Figs. 7-8, item numbers 42-45 . Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet"

pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to under 37 CFR 1.83(a) because they fail to described in the specification the figures show in Figs. 6-8. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 1-6, 10-13, 15, 23 and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by admitted prior art of Figs. 1-2.

Regarding claim 1, admitted prior art of Figs. 1-2 disclose current measurement apparatus comprising a Rogowski coil (item #10) wherein the Rogowski coil (10) comprises a coil (item #16) and a central conductor (item #18) extending through the coil (16) wherein a single homogeneous wire (outer sheath 14) forms both the coil (16) and the central conductor (18) and said wire (14) is insulated prior to forming the Rogowski coil (10).

Regarding claim 2, admitted prior art of Figs. 1-2 disclose the wire (14) is insulated by insulating material [see paragraph [0008], lines 1-2].

Regarding claim 3, admitted prior art of Figs. 1-2 disclose insulating material is resistant to physical damage [see paragraph [0008], lines 1-7).

Regarding claim 4, admitted prior art of Figs. 1-2 disclose complete outer surface of the wire (14) is coated with an insulating material [see paragraph [0008], lines 1-2].

Regarding claim 5, admitted prior art of Figs. 1-2 disclose the complete outer surface of the wire (14) is coated with an insulating material which provides reinforced insulation [see entire paragraph [0008]].

Regarding claim 6, admitted prior art of Figs. 1-2 disclose the insulation material comprises a wrapping for the wire (14) [see paragraph [0008], lines 1-2].

Regarding claim 10, admitted prior art of Figs. 1-2 disclose the Rogowski coil (10) is formed by providing a straight central conductor (18) section and winding a coil (16) around at least a part of the straight electrical conductor section (18).

Regarding claim 11, admitted prior art of Figs. 1-2 disclose Rogowski coil (10) comprises an inner sheath (inner sheath 12).

Regarding claim 13, admitted prior art of Figs. 1-2 disclose the Rogowski coil (10) comprises inherently [see **Note** below] an end wherein the end does not require an insulation cap (cap 11).

[**Note:** Although the prior art does not specifically disclose the claimed "an end", this feature is seen to be an inherent teaching of that device since it is well known in the art that Rogowski coil has ends for the coil to function as intended.]

Regarding claim 15, admitted prior art of Figs. 1-2 disclose the Rogowski coil (10) comprises inherently [see **Note** below] a first end and a second end.

[**Note:** Although the prior art does not specifically disclose the claimed "an end", this feature is seen to be an inherent teaching of that device since it is well known in the art that Rogowski coil has ends for the coil to function as intended.]

Regarding claim 23, admitted prior art of Figs. 1-2 disclose a method of forming current measurement apparatus comprising forming a Rogowski coil (10) having a coil (16) and a central conductor (18) extending through the coil (16) from a single homogeneous insulated wire (outer sheath 14).

Regarding claim 32, admitted prior art of Figs. 1-2 disclose a Rogowski coil (10) having a coil (16) and a central conductor (18) extending through a center of the coil (16) and a single homogeneous insulated wire (14) forms both the coil (16) and the central conductor (18).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 7, 9 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art of Figs 1-2 in view of Ishii et al (EP 1394818A1).

Regarding claim 7, admitted prior art of Figs 1-2 disclose insulating material [see paragraph [0008], lines 1-2]. However, they do not disclose insulating material is an extrusion. Ishii et al disclose [see Fig. 1] a current measurement apparatus comprising a wire (conductor 6a) that is insulated by insulating material (insulating layers 6b, 6c and 6d) that is an extrusion (see paragraph [0059]). Further, Ishii et al teaches that the addition of insulating materials is advantageous because it helps cover the wire to provide more heat resistance while increasing production speed (see paragraphs [0002], [0008]-[0009]). It would have been obvious to a person

having ordinary skill in the art at the time the invention was made to modify the apparatus of Bosco et al by adding insulating material around the wire as taught by Ishii et al in order to provide more heat resistance while increasing production speed during used of the current measurement.

Regarding claim 9, Ishii et al disclose the insulating material (6b, 6 and 6d) coating is less than or equal to 0.125mm (see paragraph [0059]).

Regarding claim 14, Ishii et al disclose the wire (6a) comprises a plurality of layers of insulating material (6b, 6c and 6d).

9. Claims 16-22 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bosco et al (5852395) in view of Kato (6885183).

Regarding claim 16, Bosco et al disclose a Rogowski coil (1). Nevertheless, it is well known, as shown by Kato, that the coil in use, the first end is arranged, in use, to locate adjacent to the second end as claimed. Kato disclosed in Fig. 1, that Rogowski coil (12) has a first end (end 9a) is arranged, in use, to locate adjacent to the second end (end 9b).

Regarding claim 17, Bosco et al disclose a Rogowski coil (1). Nevertheless, it is well known, as shown by Kato, that the coil has a first end member located on the first end is arranged, in use, to engage a second end member located on the second end. Kato disclosed in Fig. 1, that Rogowski coil (12) has a first end member (beginning loop 12a) located on the first end (9a) is arranged, in use, to engage a second end member (end loop 12b) located on the second end (9b).

Regarding claim 18, Bosco et al disclose a Rogowski coil (1). Nevertheless, it is well known, as shown by Kato, that the coil has a first end member located on one end of the

Rogowski coil is arranged, in use, to cooperate with a second end member located on a second end of the Rogowski coil. Kato disclosed in Fig. 1, that Rogowski coil (12) has a first end member (12a) located on one end (9a) of the Rogowski coil (12) is arranged, in use, to cooperate with a second end member (12b) located on a second end (9b) of the Rogowski coil (12).

Regarding claim 19, Bosco et al disclose a Rogowski coil (1). Nevertheless, it is well known, as shown by Kato, that the coil has a first end of the Rogowski coil is arranged, in use, to cooperate with a second end member located on the second end of the Rogowski coil in order to form a contiguous loop. Kato disclosed in Fig. 1, that Rogowski coil (12) has a first end (9a) of the Rogowski coil (12) is arranged, in use, to cooperate with a second end member (12b) located on the second end (9b) of the Rogowski coil (12) in order to form a contiguous loop.

Regarding claim 20, Bosco et al disclose a Rogowski coil (1). Nevertheless, it is well known, as shown by Kato, that the coil has a first end of the Rogowski coil is arranged to magnetically cooperate with a second end of the Rogowski coil. Kato disclosed in Fig. 1, that Rogowski coil (12) has a first end (9a) of the Rogowski coil (12) is arranged to magnetically cooperate with a second end (9b) of the Rogowski coil (12).

Regarding claim 21, Kato disclosed in Fig. 1, that Rogowski coil (12) has a first end (9a) of the Rogowski coil (12) is arranged, in use, to cooperate with a second end member (12b) located on a second end (9b) of the Rogowski coil (12) in order to form a contiguous loop the first end member (12a) comprises a female member and the second end member (12b) comprises a male member.

Regarding claim 22, Kato disclosed in Fig. 1, that Rogowski coil (12) has a first end member (12a) is arranged in use, to be secured to the second end member (12b) solely by magnetic force.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892 for details.

Base on the amendment, the following is being applied.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jermele M. Hollington whose telephone number is (571) 272-1960. The examiner can normally be reached on M-F (9:00-4:00 EST) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ha Nguyen can be reached on (571) 272-1678. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jermele M. Hollington/
Primary Examiner
Art Unit 2829

/J. M. H./
July 1, 2009